



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Hiroto HORIKAWA

Group Art Unit: 2851

Application No.: 09/139,296

Examiner: P. Kim

Filed: August 25, 1998

Docket No.: 101809.01

For: STAGE UNIT, DRIVE TABLE, AND SCANNING EXPOSURE APPARATUS USING
SAME

REQUEST FOR RECONSIDERATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

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In reply to the August 11, 2003 Office Action, the shortened statutory period for reply being extended by the attached Petition for Extension of Time, reconsideration of this application is respectfully requested in light of the following remarks.

Claims 28-33 are pending, and stand rejected under 35 U.S.C. §102(e) over U.S. Patent No. 5,477,304 to Nishi. This rejection is respectfully traversed.

A. Reasons Why Claims 28-33 Are Patentable

In rejecting these claims, the Office Action asserts that actuators 38, 40, 42 of Nishi correspond to the claimed "first linear motor." Applicant respectfully submits that the Nishi actuators 38, 40, 42 are not linear motors. In fact, Nishi expressly distinguishes between linear motors (associated with the "relative scanning drive apparatus 24") and actuators 38, 40, 42 (associated with the "fine adjustment control drive apparatus 25"). For example, compare col. 9, lines 12-19, describing the "linear motor scheme" associated with the

elements of the relative scanning apparatus 24, and col. 9, lines 45-59, describing the "actuators" 38, 40 and 42 associated with the fine adjustment control drive apparatus 25. The

Office Action's assertion that the Nishi "actuators" are "linear motors" is contrary to the express teachings of Nishi. Accordingly, Nishi does not anticipate claims 28-33, and Applicant submits that claims 28-33 should be allowed for at least this reason.

As described at col. 9, lines 53-59 of Nishi, the reticle fine adjustment stage 21 is biased toward the actuators 38, 40, 42 by springs 37A-B, 39A-B and 41A-B, and the reticle stage position can be finely adjusted by "adjusting the displacement amounts of the three actuators." Such an arrangement in which biasing springs are required to keep the stage in contact with the actuators is not consistent with a linear motor. A linear motor is capable of moving in either direction without the need for springs. The structure of the Nishi actuators clearly is different from the structure of the Nishi linear motors, which is why Nishi does not refer to the actuators 38, 40 and 42 as "linear motors." One having ordinary skill in the art would understand that the Nishi actuators are not linear motors due to the above-noted description and drawings of Nishi.

The Office Action relies upon U.S. Patent No. 4,770,181 to Tomoda, as allegedly establishing that a linear actuator is a linear motor. However, the structure disclosed by Tomoda is different from the structure disclosed by Nishi. For example, the "linear DC motor" of Tomoda is movable in both directions (see col. 5, lines 20-28), and does not require a spring to bias the movable part of the motor against the structure that is to be moved. Thus, it is not appropriate to rely upon the teachings of Tomoda for supplementing the disclosure of Nishi, because the linear DC motor of Tomoda is structurally different from the actuators 38, 40 and 42 of Nishi. At most, Tomoda shows that some linear actuators are linear motors.

However, Tomoda does not establish that all linear actuators are linear motors, and it does not

establish that the Nishi actuators are linear motors. Thus, the Office Action's reliance on Tomoda is misplaced.

B. Additional Reasons Why Claims 29, 31 and 33 Are Patentable

Each of claims 29, 31 and 33 recites that "a magnet system and an electric coil system belong to the first linear motor, ...the magnet system of the first linear motor being connected to the mask stage and the electric coil system of the first linear motor being connected to the movable part of the second linear motor so as to move with the movable part of the second linear motor." Nishi does not disclose these features.

The Office Action appears to rely on Tomoda to assert that the actuators 38, 40 and 42 of Nishi "inherently include[s] an electric coil system and a magnet system." See page 3, lines 9-10 and page 4, lines 1-2 of the Office Action. This reasoning is factually and legally flawed. The reasoning is factually flawed because, as discussed above, the structure of the Tomoda linear DC motor clearly is different from the structure of the Nishi actuators. There is no reason to believe that the Nishi actuators have the same structure as the Tomoda linear DC motor; they clearly do not have the same structure. The reasoning is legally flawed because Tomoda merely describes one type of linear actuator; it does not establish that all linear actuators have the same structure as Tomoda, and it does not establish anything about what is inherent in the Nishi actuators.

When a reference is silent about an asserted inherent characteristic that is necessary for the reference to be anticipatory, such gap in the reference may be filled by recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Tronzo v. Biomet, Inc., 156 F.3d 1154, 1159, 47 USPQ2d 1829, 1834 (Fed. Cir. 1998), citing Continental Can Co. USA Inc. v. Monsanto Co., 948 F.2d 1264, 20 USPQ2d 1746 (Fed. Cir. 1991). Inherency, however, may not be established by probabilities or possibilities.

The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

See also Kennecott Corp. v. Kyocera Int'l Inc., 835 F.2d 1419, 1422, 1423, 5 USPQ2d 1197,

1198 (Fed. Cir. 1987) (under the doctrine of inherency, the disclosure of a device that inherently performs a function, operates according to a theory, or has an advantage is necessarily a disclosure of that function, theory or advantage, provided the asserted inherent feature is the necessary and only reasonable construction to be given the disclosure by one skilled in the art).

The actuators 38, 40 and 42 do not necessarily have an electric coil system and a magnet system, and it is legally improper for the Office Action to assert that such features are inherent in Nishi. The above-described facts establish that the structure of the Nishi actuators is not the same as the structure of the Tomoda linear DC motor. Accordingly, claims 29, 31 and 33 are patentable over Nishi for this additional reason.

C. An Interference With U.S. Patent No. 5,767,948 Should Be Declared

For the reasons set forth in the Amendment filed on March 17, 2003, Applicant respectfully submits that an Interference with the above-identified patent should be declared.

* * * * *

In view of the foregoing, Applicant respectfully submits that claims 28-33 are allowable, and that an interference with U.S. Patent No. 5,767,948 should be declared.

Should the Examiner believe anything further would be desirable to place this application in even better condition for allowance, the Examiner is invited to contact

Applicant's undersigned attorney at the telephone number set forth below.

Respectfully submitted,



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Registration No. 33,565

MAC/ms

Attachment:

Petition for Extension of Time

Date: December 30, 2003

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